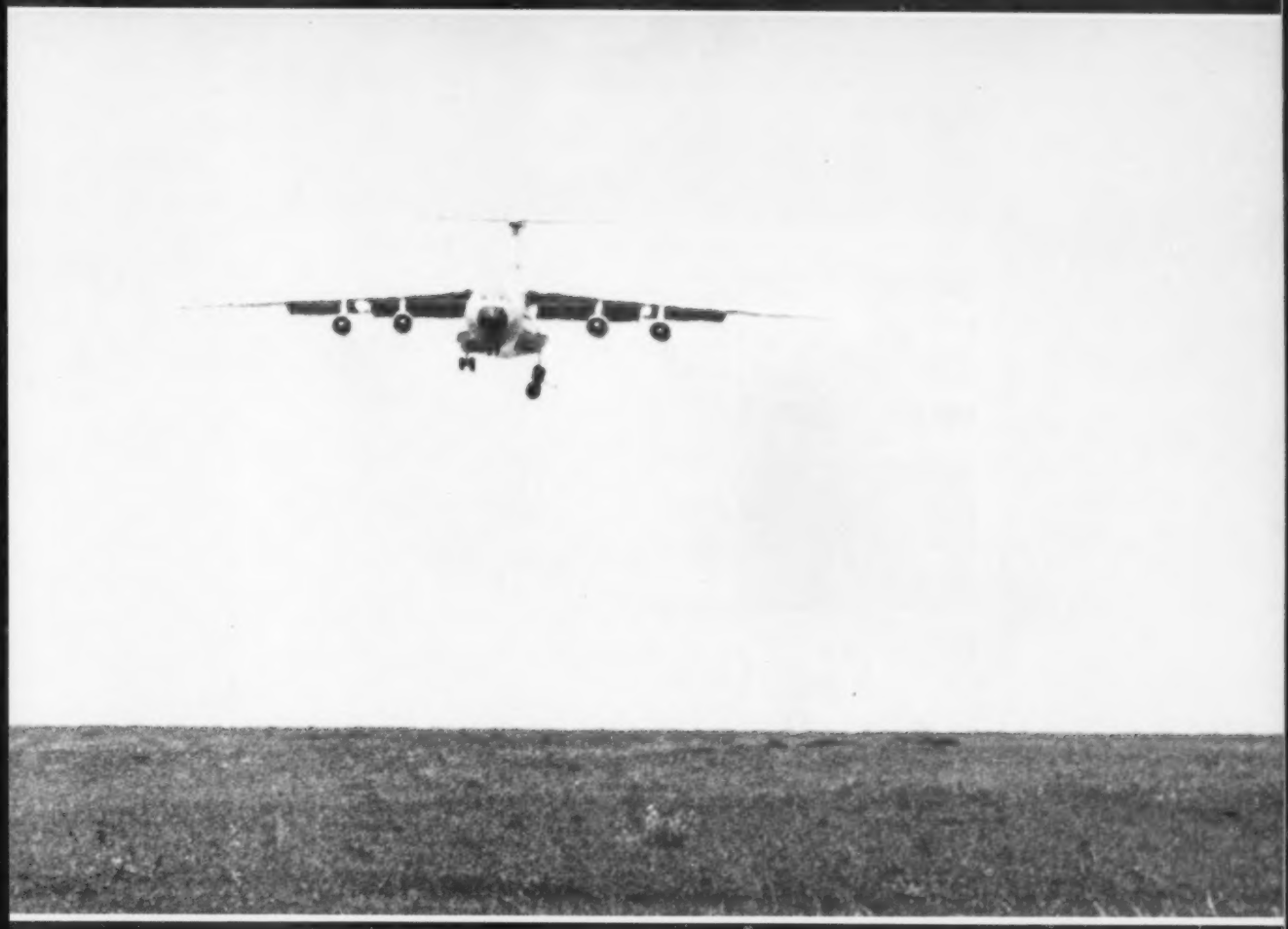
The MAC Flyer

OCTOBER 1981



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The MAC Flyer

MILITARY AIRLIFT COMMAND

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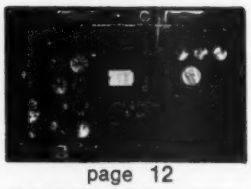

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FLYER FORUM

Dilettantes

by John McCollister, PhD

I learned a new word today, "Dilettante." That's the coinage given someone who has but a superficial or passing interest in an art or a branch of knowledge. I suppose I'm a dilettante when it comes to opera. As an amateur singer, I can hold my own in the church choir. I enjoy singing arias from "The Barber of Seville" and "Carmen" for anyone kind enough to listen. However, the only way I'd be invited on stage at the Kennedy Center would be to assist a custodian in sweeping away the debris after a performance.

Lack of talent? Perhaps. Yet raw talent isn't everything. A perfectly good singer can strike out despite whatever quality is evident simply because of what isn't there—a drive to study, practice and sacrifice for the art.

On several occasions some stranger who has learned that I've written several books has approached me saying: "I've always wanted to be a writer."

"Wonderful," I say. But I follow with the question: "And how many hours have you written this past week?" "Uh . . . well . . . not much . . . none. I had other obligations, and...ah..." The excuses continue *ad nauseam*.

It's obvious. The stranger doesn't want to be a writer. He merely seeks the glory of the writer. He's interested in the rewards without paying the price of weeks, months, even years bent over a typewriter, writing, editing, and rewriting.

Dilettantes—they're everywhere. Even in aviation. In days past we could endure the "once-a-month pilot" who climbed aboard his J-3 Cub for a hop around the pattern. But times and demands change. Complex aircraft, sophisticated avionics and mounting regulations require the occupant of a pilot-in-command's seat to possess skills necessary to work with them effectively. Still the skies are inhabited by a few who have but a passing interest in aviation and are unwilling to devote the time required in order to remain proficient. At the same time, the safety of each is in direct proportion to the expertise of all.

Dilettantes—who needs 'em? Certainly not those of us in aviation.

from —*Illinois Aviation*

Dr. John McCollister is consultant to the President of Embry-Riddle Aeronautical University and his thoughts on the "triflers" and "dabblers" in aviation holds a clear message for all flyers, military and civilian alike.—Ed.

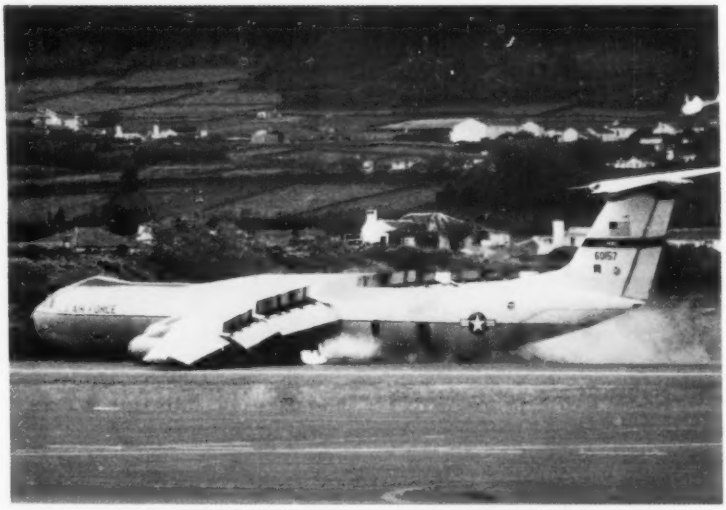
The main gear separates from the aircraft.

Six Short Rings at Lajes

"This is MAC 027 on guard, MAC 157 do not raise your gear, do not raise your gear!"

Imagine getting a call like that just as your C-141B lifts off and ***after*** you have raised the gear handle. Yet, this was the very situation Captain John D. Hauck Jr. and crew of the 30th MAS faced as they took off from Lajes Field, Azores last June.

As their Stretch Starlifter rotated, the inner strut of the left main landing gear slid completely out of the outer strut, leaving only the gear torque arms (scissors) holding the bogie to the aircraft fuselage. Major Michael Rankin, a flight examiner who happened to be on the Lajes ramp getting ready to take off on another C-141, casually watched 60157 as it taxied out for takeoff. But as the aircraft began rotating, he noticed something radically wrong with the left gear, so he hustled to his aircraft and radioed on guard for the crew not to raise the gear, but it was too late. Unaware of the problem with their undercarriage at the moment of takeoff, the McGuire AFB crew had already initiated the gear retraction sequence. But when the gear indicator remained in the "in transit" position, Captain Hauck knew they had a problem. This was almost simultaneously confirmed by another call, this one from the Tower, "MAC 60157, Lajes Tower, be advised your gear on the left side is hanging down, hanging down sir!" Two of the tires on the left gear were now jammed into the wheel well by the partially closed gear door. Two others hung below the wheel well with the inner strut parallel to the left wing and pointing toward the wingtip. SSgt Gene Powell, IFE, and Sgt Mark Crooker, scanner, went down to check the gear well for damage, while Captain Hauck brought the aircraft around for a low-level flyby to give the ground observers a better look at the undercarriage. After getting confirmation of the left gear's condition they proceeded to a holding pattern. The AC initiated a Conference Skyhook to discuss the available options with experts on the ground, while Captain Stephen Frye, the copilot, flew the aircraft. The option of air refueling and flying to a more suitable airfield in Europe or England had to be discarded because the crew was



Torching occurs in the left wheel well as the torque arm scrapes the runway.

not aerial refueling qualified. The next problem was the weight. With 45,000 pounds of cargo on board plus fuel, the B-model's approach and landing speed would be high. This could be critical in a crash landing, so the lower the weight the better the chance to maintain control and minimize damage and danger to the eight-man crew and 24 passengers. The consensus was to land back at Lajes after jettsioning all 10 pallets of cargo. The crew decided to burn the fuel down to about 15,000 pounds which would leave them enough to make a second approach and landing in case something went wrong on the first attempt. MSgt William Nicholson, FELM, and SSgt John Gordon, LM, prepared for the jettison and helped brief the passengers. The third pilot, 1LT Gregory Breland, copilot, sitting in the jump seat, was the only airdrop qualified crewmember on board. He was able to offer helpful hints and techniques that seemed appropriate to this very unusual situation. Although Starlifters routinely airdrop cargo, this was the first attempt to jettison palletized cargo from a C-141 in conjunction with an emergency. With Captain Hauck hand-flying the aircraft out over the water, and with the two loadmasters accomplishing the emergency procedures in the cargo compartment, all 10 pallets, including one double pallet, were jettisoned without a hitch. Now came the moment of truth for the crew of 60157—the landing.

They prepared for the impending emergency landing by securing all loose items and making sure the passengers had their seat belts securely fastened. Emergency exits were opened, along with the pressure door. The crew entrance ladder was stowed to make a swift exit

30 MAS crew, MAC 60157. Back Row (Left to Right): Sgt Mark H. Crooker, FE; Capt Stephen B. Frye, CP; Capt John D. Hauck Jr., AC; 1Lt Gregory D. Breland, CP. Front Row (Left to Right): Sgt Kenneth D. Millahn, FE; SSgt Gene N. Powell, FE; MSgt William T. Nicholson, LM; SSgt John W. Gordon, LM.

easier. When the gear was lowered, the left bogie fell out of the wheel well and again hung below the aircraft by the torque arms. The gear pin was installed in the nose landing gear but the pin was not inserted in the right main gear. The crew wanted the option to retract the right gear on the ground if directional control problems developed.

Another flyby was made and ground observers again confirmed that the bogie was hanging vertically with the strut parallel to the wing. Captain Hauck took control of the aircraft about 10 miles from touchdown and lined up the crippled Starlifter for a straight-in approach to runway 16 at Lajes.

When the tires of the dangling bogie finally touched the runway, they bounced several times before beginning to spin, and the bogie centered itself to an almost normal forward rolling position. As the fuselage came closer to the pavement, the strut and tires jammed between the main gear door and the gear pod. Then, suddenly, the torque arms severed as the bogie twisted out and away from the gear pod, breaking off the outer main gear door as it careened to the rear. The remainder of the upper torque arm still attached to the aircraft then folded back against the gear strut housing. This carried much of the weight of the aircraft as it settled onto the right main wheels and the nose landing gear. Although some torching occurred when the left wheel well and torque arm scraped along the runway surface, no sustained fire occurred. Due to Captain Hauck's faultless landing technique, the aircraft came to rest on the centerline with about 4,500 feet of runway remaining. Captain Frye pulled the fire handles on number one and four engines when they first touched down and the remaining two when they finally came to a stop. Then Sgt Kenneth Millahn, FE, cut power, switched off the battery and assisted the others in helping the passengers out. All passengers and crewmembers evacuated the airplane without any problems. This was a very eventful landing indeed, and although damage to the aircraft was substantial, the professional actions by Captain Hauck and the entire crew kept this mishap from becoming a tragedy.

Ever Been There?

What are some of the techniques you use when operating into an unfamiliar airfield?

by Major Alan D. York
Supervising Editor

To get some answers to this burning question, a couple of us *TMF* staffers ventured forth for the purpose of ensnaring a few unsuspecting aerospace specimens in a net of journalistic interlocution. Our aim was to bag a pilot or two, and if we were lucky, per chance even a navigator. "What better place to catch aircrews in the act of doing their thing than a typical flight planning room," I reasoned to my trusted assistant as we pulled into a base ops parking spot. Our local "typical flight planning room" was temporarily deserted when we entered so we set up our "blind" to await our first flyer.

It didn't take long for our quarry to arrive on the scene. "What luck, a pilot actually wearing a Nomex flight suit. Must be a 'strat airlifter' off the Starlifter that arrived earlier this afternoon," I said to my colleague, knowingly adding, "a major with a 5,000-hour patch ought to be a gold mine of experience." Stepping right up to the transient flyer, I asked if he would mind answering a couple of informal questions for us. He immediately bolted for the door and ceased his efforts to "E and E" from the premises only after I assured him I was *not* from stan-eval, but was with his friendly fly-safe magazine. He agreed, so we accompanied him to a flight planning table where I asked him about unfamiliar airfield techniques.

He responded by saying, "I try to be mentally prepared for the worst approach condition. For instance, coming in over water at night to a runway with no overrun and no approach lights, especially if there's no glide path info available, is the pits, believe me! Depending on the brightness of the runway lights and whether it's wider or longer than average, you could either land short or over-compensate for the landing illusion by staying too high, which would necessitate a steeper than normal approach to keep from landing long. That's why I try to picture in my mind how the field is going to look from out on final."

"But what do you do to prepare yourself for such an approach?" I pressed, sensing I was close to paydirt.

"Well, the Airport Qualification slide-tape programs are really useful, and if *The MAC Flyer* has a 'Deja Vu' on the particular field, I look that up too."

"*The MAC Flyer*, eh? Let me buy you a soda!" I offered—this guy had just made a friend for life. I added for his information that most "Deja Vu's" were adapted from the Airport Qualification Program which can be obtained from the aircrew learning center. While we were talking, several other crewmembers had drifted in.

A couple captains wearing blue shirts sauntered over to an adjacent table and were preparing to check the route on their CT-39 computer flight plan, so I couldn't help inviting them to join us in our "research effort." One of the captains took a rather conventional approach to our question and ticked off some standard references that would be helpful, and in most cases essential, for good mission planning anytime, "FLIP, IFR Supplement, airfield summary and restrictions, notams, approach plates, STARS, and published terminal arrival procedures for starters," he said in one breath, then continued, "And if I were flying airplanes that routinely crossed the pond, I'd check the Foreign Clearance Guide, FLIP Area Planning, Airman's Information Manual, Jeppesen's if available, and host nation pubs, just to

name a few." Then he added sheepishly, "But to get a 'feel' for what it's *really* like, the first thing I'd do is check scheduling to see if I could track down another crewmember who had been there recently."

A passing lieutenant hailed one of our captains and joined in briefly before making his way to the snack bar. "Study everything available from every possible source," he stated flatly. The lad obviously had potential but with all that studying I wondered when he would find time to actually fly the mission. I asked him to be more specific, so the fledgling flyer continued with some surprisingly insightful suggestions, gleaned no doubt from the best of all teachers —experience. "Double check critical information," he began. "There's always a possibility of conflicting approach data—like the NDB approach to Duluth published a couple years ago that was mistakenly overprinted on the background plate of a small Wisconsin airport,

"*The MAC Flyer*, eh?
Let me buy you a soda!"

complete with erroneous field elevation, airfield diagram, minimum safe altitudes, and feeder fixes. Watch the descents into unfamiliar airfields, also," he added. "Know where the highest terrain or obstructions are within 100 miles. We've had quite a few accidents over the past few years that happened during descent."

This suddenly reminded the C-141 driver of another point. "For overseas operations, also be sure and check with 'intel' to see if they have anything on the area."

Just then, another greenbagger came in and introduced himself as the navigator off the Starlifter crew. "I like to see pilots make the maximum use out of the INS for windshear information, or doppler if you're flying in an aircraft that has one," he prompted. "And the radar altimeter is useful for terrain clearance."

"Another good technique," he added, "is to make the field the center of the terrain chart and show a 100 nautical mile radius around the field. This makes it easier to monitor the descent and approach. Also I make sure and use the Chart Updating Manual (CHUM) to plot the latest towers in the area surrounding the field that were built after the ONC or TPC charts were published."

Thinking along similar lines the other captain offered, "I try to use every possible navaid to crosscheck the approach. An ILS is great to backup a visual approach. Even setting the ADF to an opposite-direction ILS's outer marker can be used as a ballpark backup for runway alignment."

"And don't forget that many towers have DF capability," added the other blue-shirt captain. "Some even use it to confirm your position as you approach, whether or not you ask for it."

Rejoining the conversation, the C-141 jock gave some hints about prior coordination with the local airfield management. "You can try to call ahead to find out about unusual problems like airfield construction, recommended ATC arrival routes and procedures, unusual parking problems or questions you may have about a notam for the airfield."

As the lieutenant was going out the door, he added, "ALCC's are good about helping pass that kind of information along if you can't talk direct."

"I was always leary of assumed wingtip clearances from the center lines of taxiways when I was flying C-141s," inserted one of the CT-39 captains, "especially at out-of-the-way places."

"Our wing ALCE does airfield surveys occasionally," said the Starlifter pilot. "These surveys have a lot of detailed information about ramp and taxiway dimensions, the types of services available, navaids, ground handling equipment and fuel on hand. They're used all the time for planning exercises. In most of the big exercises I've been on, the crews were also given airfield brochures containing all kinds of helpful information."

"Yeah, knowing what the billeting arrangements are can be helpful in planning alert times and stuff. Some places may require extra time to get from billeting to the flight line," offered the navigator, obviously thinking back to some long and bumpy rides on Bluebird buses.

By this time I figured we had collected enough material for one afternoon, but just as we were getting ready to leave, a chubby, bald-headed major with a rakish mustache, who had been lurking close by, suddenly accosted me, obviously intent on sharing his ideas with anybody who would listen. "I tell ya the most important thing to keep in mind," he proposed, taking a bite of what appeared to be a burrito and washing it down with a swig of cola. "Per diem rate and time of arrival!"

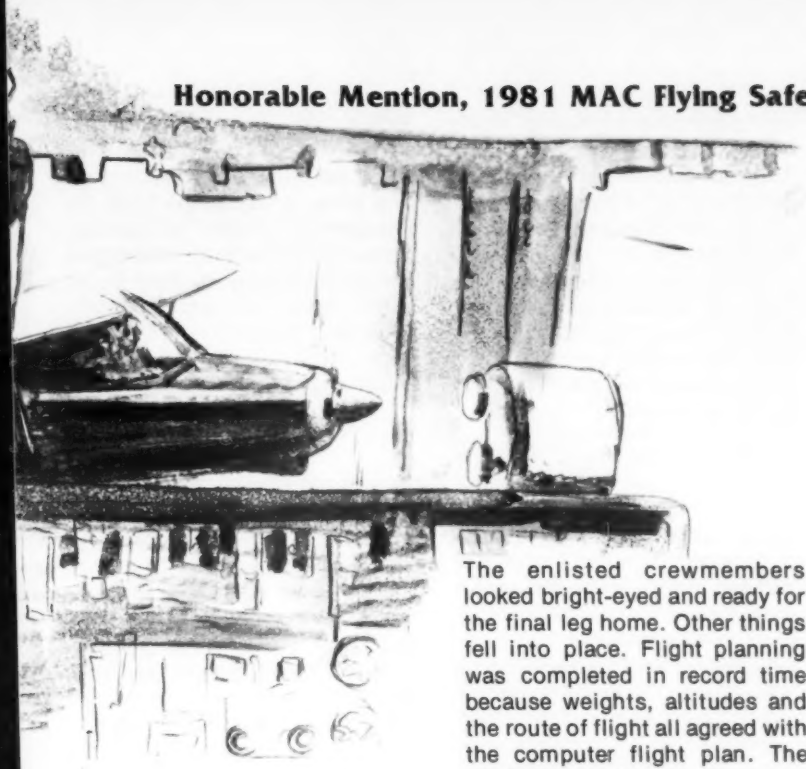
Collision

by Major Richard J. Formica Jr.
443 Technical Training Squadron
Altus AFB, Oklahoma

"Go," proclaimed the copilot. The pilot eased the yoke back and the Starlifter rose smoothly into the hazy blue European sky. With a positive rate of climb established, the left-seater ordered, "Gear up."

"Gear up," acknowledged the copilot and then started through the motions to retract the landing gear. Indicators checked normal, landing gear lever up, spoilers disarmed and flight selected. For the final professional

Honorable Mention, 1981 MAC Flying Safety Writing Contest



touch, thought the copilot, taxi lights off. Noting the gear was up, he then stated, "gear is up."

"Uh-huh, flaps in a minute," muttered the pilot, "I'm leaving them down for noise abatement."

Good idea thought Jerry, I've sure got a lot to learn.

First Lieutenant Gerald Williams, copilot qualified, was on his first operational mission. He was glad to be in MAC. The job of flying C-141s to the far flung corners of the world was a challenge that offered both rewards as well as some trying moments. Fortunately the frustrations quickly melted away once airborne.

Like this morning, the alert time was perfect, 0600 local, 0500 zulu. The crew bus was in front of the "Q" almost as soon as the AC hung up the phone. The enlisted crewmembers looked bright-eyed and ready for the final leg home. Other things fell into place. Flight planning was completed in record time because weights, altitudes and the route of flight all agreed with the computer flight plan. The pilot got an "A" on the clearance—no changes by the base ops dispatcher—and finally, the weather back home was forecast to clear up behind a low pressure system moving rapidly up the coast.

Then things began to come unglued. First, there was some confusion about the cargo; it ended up having to be reweighed and resequenced. This caused a delayed departure and everyone began to get tense. Next a hydraulic leak had to be repaired before the pressure door could be closed—a parts plus one-hour job. The last problem surfaced when we called for our clearance. Since we missed our original departure time, we had to refile the flight plan.

Finally, at 1255 local, we got airborne, nearly six hours into our crew duty day.

"Hey Jerry," barked the pilot, "flaps up."

"Huh, oh yeah, flaps up," repeated the copilot, snapping out of his reverie. "Sorry, I was thinking how great everything started out and now it's going to be a long day."

"Yup! That's the way it goes sometimes, but at least we're on the way home. Engineer, pilot, after-takeoff-climb checklist please."

Little by little, activities aboard the westbound Starlifter fell into the normal routine. Coffee was consumed, checklists were accomplished, routes were followed, controls were adjusted, radio calls made, the loadmaster was cleared off headset, and more coffee was consumed. With coast-out behind them activities settled down to a normal cruise routine. "It sure is a pretty day," commented Jerry.

"Yup, it certainly is m'boy," replied the pilot in his best C.R. Terror imitation. "Heading west at this time of the day gives us daylight all the way home. That can be an advantage or a disadvantage, depending on how you look at it."

"I think I know what you mean," chuckled Jerry.

"Pilot, engineer, here's the how-goes-it. And be advised, sir, I'm running number four generator in isolated for a slight frequency fluctuation. CSD temp is normal, everything looks okay."

"Fine, keep me advised if there is any change. Now Jerry, after you get off our position report, how about getting out your training guide and we'll see what we can cover."

Many many miles to the west another pilot was also thinking about flying. Doctor Baker "Buck" Smith was happily looking forward to visiting his son. Buck knew the trip would be doubly enjoyable because the rapidly clearing weather would not only make the fishing more pleasant, but allow him to fly his newly restored J-3 Cub. Doc Smith was proud of his Cub. Although it had a newer engine and larger fuel tanks, it still looked like the original. Almost thirty years earlier he had learned to fly in a similar model, an airplane that had become synonymous with general aviation.

Granted it was a VFR-only airplane, but a careful pilot, with careful planning, could fly virtually anywhere. The airplane had become a classic. Buck planned on flying from his local airport in northern Delaware, across the bay, up the Jersey coast to Teterboro Airport, New Jersey, near his son's home. All he had to do was spin the in-flight winds to figure his headings and checkpoint times, but first, thought Buck, I must see to my last few patients. Then I can be on my way.

"Sir, I've secured HF contact with MacDill now that we're in contact with Moncton Center, like you suggested, but I didn't update the weather or pass the block time or maintenance to command post."

"Don't worry," sighed the pilot. "We'll be flying within UHF range of Loring and you'll be able to update the weather by talking directly to METRO. You'll also be able to pass the other info to base ops and have them relay it to the home drome. Easy, huh?"

"Yes sir," replied Jerry, amazed at the simplicity of the solution. "I've got lots to learn. I'm beginning to realize flying the airplane is the easiest part of this job. Learning all the unwritten tricks of the trade necessary to get the mission done is the hard part."

"Jerry, for a copilot on his first ride, you have great insight. You just keep that fact in mind and you'll have no trouble upgrading when you get the required flying time."

"Mrs. Stanski, was that my last patient?"

"Yes Doctor," replied Buck's receptionist.

"Very good, would you please call the flight service station for me? I need to get the weather and file my flight plan."

A second sun was born in the late afternoon sky.

"MAC 40161, contact Boston Center on 120.25."

"Roger, 120.25, good day—Boston Center, MAC 40161, flight level 390."

"Roger MAC 161, 390, radar contact."

We're in the home stretch now, thought Jerry with a mighty yawn. Those ground delays sure made this a long day.

"Contact," exclaimed Doc to the lineman's query. The little Cub shook slightly as the prop was spun. Then the engine kicked over and a satisfying purr filled the air.

The engine runup and pretakeoff check were completed quickly, and minutes later the Cub was trundling down the grass strip. After turning out of the traffic pattern, Buck set climb power and noted the time. If the winds hold, he thought, I should be landing about 6 o'clock; that should give me about half an hour or so of night time. No problem, it's clear and everything is working fine.

Turning northbound toward the Delaware Bay, Buck climbed the Cub slowly to his planned cruising altitude of 5,500 feet. At that altitude he had a good safety margin in case the engine quit over the bay and he had to glide back to land.

"MAC 40161, descend and maintain 12,000, Atlantic City altimeter 30.00. Cleared present position direct Coyle."

"Roger, 12,000, 30.00, direct Coyle."

"Engineer, pilot, descent checklist."

Gleaming golden in the afternoon sun, the Starlifter tilted gracefully toward the earth. The checklist was accomplished quickly and professionally as the crew perked up, thinking about the coming approach and landing at home.

Somewhere below them a small yellow dot moved steadily northward.

"MAC 40161, descend so as to cross Coyle at 5,000 feet, contact approach control on 134.7."

"Coyle at 5,000, approach on 134.7—Approach, MAC 40161 through 7,500 for 5,000."

"Roger MAC 161, radar contact, after Coyle fly heading 270 for radar vectors."

"Pilot, engineer, I've just disconnected number four CSD. The overheat light came on and the frequency started to fluctuate out of limits."

"Approach, MAC 161, say

again, you were blocked."

"MAC 161, approach, traffic 10 o'clock 4 miles northbound, slow, altitude unknown. After Coyle—"

"A thousand above," interrupted the copilot.

"Thanks, do you see the traffic?"

"This sun makes it impossible to see anything."

"MAC 161, approach, traffic 11 o'clock 1 mile . . . ."

"Negative contact!"

"Jerry, ask approach—"

Suddenly, for the briefest comprehensible instant the sun disappeared and a shadow covered the cockpit of the Starlifter. Neither pilot had time enough to do anything except begin to perceive the unexpected darkness. Then just as suddenly, the darkness ended and a second sun was born in the late afternoon sky. Sadly though, in the birth of that second sun, six gallant men and two remarkable aircraft perished.

The investigation of the catastrophe was long and arduous. Physical evidence was difficult to gather because the wreckage was widely scattered, so elaborate simulations had to be researched and tested.

The most probable scenario had the collision occurring at approximately 5,350 feet MSL based on the local Atlantic City altimeter setting. It assumed Doctor Smith was in level flight at 5,500 feet indicated altitude with an altimeter setting of 30.15 from his local airport. Further evidence as to the probable altitude was calculated using a Starlifter's average rate of descent and the time interval from the copilot's call through 7,500 feet and the time of the disaster.

This scenario had the Starlifter approaching the Cub from above and slightly forward of its right wing. The high wing of the Cub probably prevented Doctor Smith from seeing the Starlifter. Similarly, the setting sun made it difficult or impossible for the Starlifter pilots to see the J-3.

The investigation stated there were no violations to any flying regulations. Each aircraft was being properly operated. All the people involved were known to be meticulous and experienced. Approach control issued traffic information to the Starlifter, but because the Cub's altitude was unknown, the controller judged a safety advisory message to be unnecessary. This was appropriate because the controller knew both aircraft were operating in VMC. Therefore, regardless of the type of flight plan, see-and-avoid applied. In other words, both aircraft had every right to be where they were. The tragedy was they ended up at the same place at the same time.

So, what went wrong? The investigators concluded that the see-and-avoid procedure was not used, or more likely did not work. Why didn't it work? Two reasons have been proposed: the high wing of the Cub blocked Doctor Smith's view, and the setting sun interfered with the vision of the Starlifter pilots.

A third factor—one which the investigation team would never know—affected the Starlifter pilots. They were distracted for a few critical seconds. Their routine activities were suddenly interrupted by the CSD malfunction. This minor, though tragically inopportune, malfunction, coupled with the approaching leveloff and the radio calls, added up to a failure to see and avoid.

Nevertheless, this accident could have been avoided—and without expensive equipment in the Cub or additional equipment in the Starlifter.

The greater responsibility lies with the aircraft under positive control. Action must be taken when see-and-avoid procedures become impossible to apply. Minor distractions must not be allowed to interfere with maintaining flight path clearance. If visual separation can't be maintained, then vectors should be requested to obtain positive radar separation. Needless tragedies, like the fictional one portrayed in this story *can* be avoided.

ABOUT THE AUTHOR

Major Richard J. Formica Jr. is a C-141 instructor pilot at Altus AFB, Oklahoma, where he presently serves as a C-141 course developer. Major Formica graduated from UNT in 1962 and navigated C-124s for four years. He later attended UPT and was reassigned to C-124s as a pilot. Major Formica completed a SEA tour flying C-47s. After SEA, he was assigned to the 438 MAW where he served as Wing Flying Safety Officer and as a C-141 aircraft commander.

Electrical failure becomes a chilling experience.

Blackout in the Cockpit

It's rare, but complete electrical failure is always a possibility, regardless of an aircraft's sophistication. In fact, several MAC aircraft have had total electrical failures in the last year. We can't cover procedures for every aircraft type, but you should be able to "customize" this discussion to your own airmachine. We'll begin with one copilot's account of an actual failure.

"One Sunday in November, we were flying our Sabreliner comfortably at FL 410 without passengers westbound from Chicago-Midway to our destination in Wyoming. We were just clearing a cold front when we experienced total electrical failure. Except for an emergency gyro horizon and its emergency lighting, we had no electric power. The emergency gyro was designed for such an occasion.

"We were more surprised than anything else. It was completely black in the cockpit except for the emergency gyro on the instrument panel. The cabin altitude began to climb, and immediately after donning our oxygen masks we started to descend in a left turn to clear the airway. I reached for my flashlight to shine on the AC's airspeed indicator and altimeter. There was one more problem. The fuel controller on one

engine had hung up at about 87 percent rpm, and without the use of the speedbrake, we had to make a very shallow descent. Even so, it was very difficult for us to stay below our limiting Mach.

"Going through about 33,000 feet, the cabin altitude stabilized. Fortunately, the cabin depressurized slowly which helped us stay on top of the situation. We descended to approximately FL 280 staying above a solid undercast which was barely visible in the twilight.

"I had checked the weather ahead prior to the emergency, and we knew we were flying into VMC beginning in the Cheyenne - Casper - Rapid City area. Using the magnetic compass and a star fix, we turned westbound. After we lost the cloud cover, we hoped to pick up the lights on Interstate 90.

"The biggest problem was cockpit darkness, since we had to continually check airspeed and altitude. Occasionally, because of twilight, we could turn off the emergency gyro to save battery power. About one hour after the electrical failure, we could see the ground from FL 280.

"Our next problem was determining our location. We picked up what we thought was I-90 and followed it for about 20 minutes. Our immediate concerns were fuel remaining and the bitterly cold interior. The windshield was cold-soaked by then, and we had to clear it by scraping the inside as we descended.

"The lights of what we thought was Rapid City appeared on the horizon. We could make out the beacons of Ellsworth AFB and the Rapid City Regional Airport. Working our way down to 21,000 feet, we circled the city and confirmed our position. Forward visibility was marginal due to frost on the inside and the outside of the windshield. Removing our masks for the first time, we were finally able to converse freely. We reviewed our situation and our emergency landing checklist.

"The airport lights were flashing at high intensity at both Ellsworth and the Regional Airport, so we knew they were waiting for us. We decided to land at Ellsworth because of the runway length, emergency equipment and VASI lights. The tower indicated the direction we were to land by the VASIs. We flew a normal pattern, lowered the gear manually and completed our landing checklist. After landing, we shut down on the runway."

The biggest problem was cockpit darkness.

This particular emergency lasted a little over an hour and a half. Later inspection of the aircraft revealed that the essential bus circuit breakers, located in the rear of the airplane, had tripped.

There were two factors at work here. Let's look first at the negative factors, realizing that any one of them could have led to a fatal accident.

• "We were more surprised than anything else," stated the pilot later. Initial reactions are important, and may determine whether or not you are going to make it. Yet the reaction was professional—neither pilot came unglued. They kept their cool despite the complexity of the problem.

• It happened at night with no moon. This fact alone was extremely difficult to deal with since they had to operate by flashlight. You always carry flashlights, don't you? (When was the last time you checked the batteries?)

• Descent was mandatory, yet a high overcast prevented them from descending to below 25,000 feet, or to 10,000 feet. In this particular aircraft, pressurization could not be maintained because the bleed air valves from the engines close when electrical power is lost. In other aircraft, cabin pressurization can neither be maintained nor controlled because of an electronically controlled system. So, cabin altitude was critical because of the grave physiological consequences of flying unpressurized above 25,000 feet for long periods of time.

• Crew coordination is essential, but communication between crewmembers is not easy when you're wearing oxygen masks. Every time you want to say something you must lift the mask to talk. Remember, without electrical power there is no intercom.

• It's bad enough to have to face the loss of almost every aircraft subsystem, all your communications and almost all navigation capability. But to deal with such a nearly impossible situation and be physically uncomfortable at the same time is adding insult to injury. It became extremely cold in the cockpit, yet they obviously could not descend.

• The loss of windshield heat and pitot heat caused additional problems. Because of windshield icing, forward visibility was reduced, and the pilots had to continuously monitor their pitot static instruments for any irregularities.

Turning now to the positive side of things, the pilots had a couple of big things going for them.

• "I had checked the weather ahead prior to the emergency and knew we were going to be flying in VFR conditions . . . ." They knew where they had to go to maintain VFR for landing—*that's a big plus*.

• The pilots had flown this general route many times before and were fairly familiar with the landmarks. After the cloud cover dissipated, they knew they could follow I-90 to the general vicinity of their destination. Knowing the terrain, the major road systems and general location of the larger towns was another big plus in their favor.

• Because the aircraft had to remain at altitude for some time, it was fortunate they carried no passengers. The oxygen supply would have been cut drastically were there three or four passengers aboard. As it was, the two pilots had the entire oxygen system to themselves, permitting them to maintain VMC at altitude.

• With complete electrical failure, you have no indication of fuel flow or fuel remaining. In this incident the pilots had known fuel reserves and were operating with a good knowledge of fuel consumption. Going down early will result in very high fuel consumption rates with most turbine equipment, so a trade-off may be necessary.

• "Except for an emergency gyro horizon . . . ." The fact that this civilian Sabreliner had an emergency gyro horizon was a very positive factor. The concepts of needle-ball-and-airspeed flying are still valid, but in many flight director systems the turn needle is inoperative during a complete electrical failure. If they had been forced to fly in IMC, the emergency gyro would have been a critical plus.

Addressing the question, "How do I cope with complete electrical failure?" leads to some interesting conclusions. Thoroughly checking the weather along your route of flight can be just as important as knowing the weather at your destination and alternate. Get into the habit of obtaining a complete weather briefing, including general forcasts for the regions you plan to overfly. This type of planning could be invaluable should you be forced to look for VFR conditions on your own.

Except for an emergency gyro we had no electrical power.

Get into the habit of checking the emergency life support systems on board your aircraft before every flight. Check for a properly serviced oxygen system, oxygen masks in good condition and good walk-around bottle pressure. These habit patterns are part of no-nonsense professionalism.

You should be completely familiar with the operation of the aircraft subsystems. During your next recurrent training session, review each aircraft subsystem and give particular attention to its use in emergencies. Don't forget about the possibility of a complete electrical failure. It's also a very good idea to periodically check your aircraft emergency backup systems, both to verify that they work as advertised and to give you hands-on experience—if permitted by your Dash One and MAC regs.

Lowering the landing gear by emergency means was necessary in this incident. But because of the complete electrical failure, the crew had no confirmation that the landing gear was down and locked when they landed. Recently, on a training flight in a similar type of aircraft, the emergency lowering of the landing gear was unsuccessful because of an improper lubricant used in the landing gear down lock mechanism. The lubricant froze and the free-fall of the landing gear wouldn't work. Needless to say, a check of this backup system could have prevented a bent underbelly.

There's nothing revolutionary about these techniques for preparing for complete electrical failure. The basic rule is still, "find VMC and land as soon as possible." But by establishing good professional habits and using them everyday, you give yourself a better opportunity to successfully cope with total electrical failure—or any other inflight emergency.

–Adapted from *Professional Pilot*

A departing editor shares his ideas on . . .

Duty

by Major James P. Coe

One of the privileges afforded those of us who become *"Flyer* Alumni" is a magazine page to express our opinions and ideas upon leaving the staff. I have probably written a million words attempting to communicate flying safety ideas to you, our readers, but one word I haven't used enough is duty.

On the back of the Airlift Memorial in front of MAC Headquarters are inscribed the words, "Duty, Honor, Country." I believe duty is first for good reasons—it is the foundation upon which honor is built and the life-blood of our country. Each person has four duties: Duty to self, duty to others, duty to country, duty to God.

Your first duty is to yourself. Shakespeare said it best, "This above all: to thine own self be true, and it must follow, as the night the day, thou canst not then be false to any man." You have an obligation to accent your own uniqueness and build on your abilities. You must discipline yourself to strive for excellence in your profession or specialty. You owe it to yourself to do your duty well each day so you can grow in strength, integrity, and knowledge.

Duty to others includes your obligations to your fellow humans. Our entire flight operations system is dependent on a mutal assumption of competence. For instance, each aviator assumes to some degree that the others on the crew have disciplined themselves toward excellence in their knowledge and skill, and that they will faithfully perform all their duties as crewmembers. Similar assumptions must be made about those others who support operations. Following this responsibility closely is your duty to other citizens in general—we are *all* public servants. When you conscientiously perform your duties to others, you are growing into a better individual through serving society.

You are today's link in a chain of American fighting men and women stretching back through 205 years of U.S. history. You are no less important to the survival of our nation than were Washington's troops at Valley Forge. Your duty to your country is spelled out in your oath of enlistment or commissioning and in the Code of Conduct. Additionally, as an aircrew member you are trusted with the well being of people, machines, and material that are vital national resources. You must conserve them; it is your duty.

By doing your duty to the United States, you join hands with millions of Americans of all colors, creeds, and of both sexes, who throughout history risked their fortunes, honors, and lives that this nation would survive as "the land of the free and the home of the brave."

As we are collectively "one nation under God" you also have a duty to your own supreme power. Whether you attend a church, synagogue, or temple is not as important as your right to do so freely and your personal dedication to a force in the universe greater than yourself. Faith in a God which requires you to respect and protect the lives and rights of other people as well as your own is fundamental to doing your four duties.

I sincerely believe that if each of us did our daily duties to the best of our ability, then we would be happier human beings, our society would prosper and grow, our nation would be stronger and we could have peace. We are capable of doing it!

It's been my privilege to communicate MAC's flight safety message to you for the last four years. If in that time I have helped you do your duty, then I have done mine. I cheerfully move on to new duties in a new place. Fly safe.

TMF Interview

C-141B assembly line.

How They Do It at the Factory

Interview with Capt Ron Wilhelmson, USAF C-141B Flight Acceptance Pilot at Air Force Plant 06, Marietta, Georgia.

TMF: Capt Wilhelmson, we would like to discuss C-141 stretch modification and flight acceptance at the Lockheed-Georgia factory. First, what events take place prior to the C-141A actually entering the assembly line?

Capt Wilhelmson: After a MAC crew flies the Starlifter into Air Force Plant 06 at Marietta, Georgia, the aircraft goes through pre-stretch processing which includes engine runs, hydraulic system checks, environmental evaluations, and stall prevention and Central Air Data Computer (CADC) checks. Prior to reaching the assembly line, the C-141A's flooring and the interior hard liner are taken out, and the bilge area is completely cleaned. The maintenance status of the aircraft is then baselined with discrepancies recorded by Lockheed inspectors. When it arrives at the assembly line, the aircraft is ready to disassemble and stretch. The entire pre-stretch process takes eight work days.

TMF: What happens once the aircraft gets to the assembly line?

Capt Wilhelmson: There are fourteen C-141 aircraft in the B-1 assembly building moving through two, seven-position modification lines at any one time. In the first four positions on the line, the Starlifter is literally pulled apart or "demated," the wiring and cables are disconnected, the two fuselage plugs are installed, and then the fuselage is reconnected. In addition, the aircraft aerial refueling system is installed. The last three work positions are used for an extensive functional check of aircraft systems that have been disturbed. The C-141B is then inspected by an Air Force Quality Assurance inspection team and sent to the flight line. At this point, the Starlifter has spent about 28 work days on the modification line.

TMF: What occurs between the time the C-141B leaves the assembly building and the acceptance flight?

Capt Wilhelmson: This period takes about 12 to 16 days and involves painting the plugs and the bilge area (when required) and also includes engine runs, electrical, hydraulic, fuel cell, and flight control checks. The stall warning system must be operative for the acceptance flight. In addition any maintenance work associated with safety of flight is accomplished. Finally, once the plane has passed several different inspections, Air Force Quality Assurance inspectors release the aircraft to the Air Force flight crews stationed at the factory.

TMF: After the C-141B is released for flight, what type of ground checks do you do?

Capt Wilhelmson: From a pilot's viewpoint, the Check Flight Dash Six ground checks assure

us that the flight controls, CADC, stall prevention systems, engines, and all other major systems are working normally prior to flight. There are a large number of ground checks performed by the flight engineers before the remainder of the flight crew shows at the aircraft, as well as a power-on check by the entire flight crew. We perform a complete functional check of the electrical system on the ground. The ground checks are thorough and we do encounter normal maintenance problems common for any plane that hasn't flown for three months. During taxi we check thrust reversers, nose wheel steering, brakes, and normal operation of all systems. In addition, prior to takeoff, we accomplish a last-chance inspection where the scanner inspects the entire interior and exterior of the stretched Starlifter for leaks or any abnormal indications.

TMF: What happens in the first ten minutes of a C-141B functional check flight at the factory?

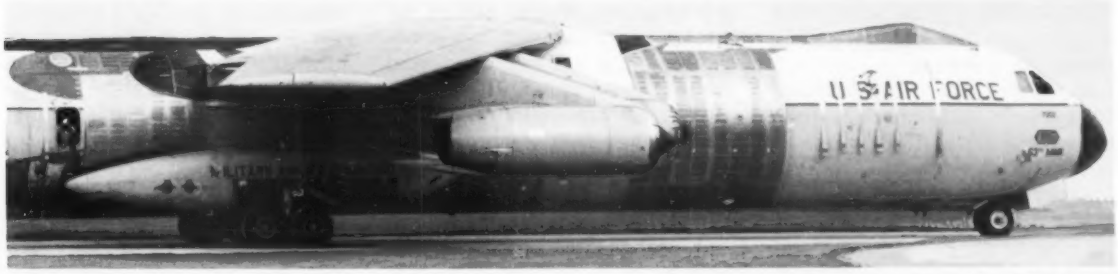
Capt Wilhelmson: Once we get cleared for takeoff we do a standing TRT takeoff to insure that the engines are capable of giving us takeoff rated thrust. The plane only weighs about 185,000 pounds at takeoff so the ground roll is extremely short. As soon as the aircraft becomes airborne, we begin a continuous and concentrated search of the sky for other aircraft. We operate in the Hartsfield-Atlanta traffic area which has considerable airline and general aviation traffic. While climbing out, we check the normal operation of the landing gear, rudder high pressure, and ejector operation. At approximately 3,000 feet we pull two symmetrical engines back to idle and climb on the other two engines. The flight engineers check the air conditioning system, check engine performance, and monitor all other systems. The scanner helps maintain outside aircraft vigilance along with the pilots. The navigator monitors the radar during the climb, checking for any adverse weather along the route of flight, and accomplishing a CADC true airspeed check at 10,000 feet. It takes us about eight minutes to get above 10,000 feet which is ample time for the two engines that are at idle to cool.

TMF: Could you explain your engine shutdown procedures?

Capt Wilhelmson: One of the checks that we perform after we get above 10,000 feet is to shut down the engines by using the T-handles with the continuous ignition on. We reset the T-handle after the engine indicates that it has shut down. We then try to restart the engine with the continuous ignition only. We've found quite a few continuous ignition systems that weren't working right when they arrived at the factory, so we've been able to either fix them while they are here or document the problem so it could be corrected back at home station. After having checked the first two engines for air start capability and continuous-ignition-only start, we switch engines. We advance the two engines previously checked to NRT and cool the other two. After an additional five minutes cooling time, we check those two engines using the same procedures.

TMF: Could you describe the CADC and flight control checks?

Capt Wilhelmson: First, we check all four altimeters at 10,000 feet. We also do a true airspeed check as we pass 10,000 feet and 200 knots calibrated air speed (CAS). Normally, the true airspeed for the CADC check is about 235 knots. For the flight controls we check each one of the control systems on separate hydraulic system power. We shut off System 1 power to the left aileron and insure that it functions with only System 2 power. We do this kind of check on the ground, but it is repeated in flight with airloads on the control surfaces. We check the tab-operable functions of the ailerons, making sure the plane is flyable in the tab-operable



—All photos courtesy of Lockheed-Georgia Company

C-141B has two new plugs and a new aerial refueling system.

Comparison of C-141A and C-141B models.

condition. Next, we check the elevator operation on emergency and normal hydraulic systems. The rudder is also checked for single hydraulic system operation. Finally, the pitch trim systems are functionally checked.

TMF: Do you fly a full functional check flight (FCF)?

Capt Wilhelmson: The profile that is called for in the Dash Six is a detailed check of each of the aircraft systems. A full FCF profile was performed on the first 20 C-141B aircraft.

After the first 20 planes, we tailored the Dash Six profile and eliminated checks on systems that were not affected by the stretch modification. For example, the cargo doors and landing gear, just to name a few, are major systems that do not go through a Dash Six check in our present FCF program. We do, however, operate those systems in accordance with Dash One procedures. Our initial profile using the full FCF took about four hours to fly. By eliminating those unrelated systems we have cut the profile down to between 1 and 1.5 hours flying time. You can see that there has been a considerable fuel savings in reducing the profile.

TMF: Could you describe the stall series used on C-141B functional check flights at the factory?

Capt Wilhelmson: We do two different stall series, one at high altitude where we are checking the Mach schedule of the stall prevention system and another series at low altitude to check the airspeed schedule. The stall vanes on the C-141B model have been repositioned and reclocked. We are checking that the input from the vane into the stall computer is good. We perform our first stall series anywhere from 31,000 to 39,000 feet MSL in a 2,000-foot block altitude. Our gross weight is about 175,000 pounds and we trim the plane to .65 Mach. We compute a shaker onset speed and turn off one of the stall systems. We let the aircraft slow down to a calculated shaker speed. During our first stall series the stick shaker will usually activate at about 115 to 120 knots. After we recover, we repeat the procedure for the other stall prevention system. After that stall series has been completed, we do a normal descent down to a block altitude of 11,000 to 15,000 feet. Here we accomplish three series of stalls, including clean configuration, flaps approach, and landing gear with full flaps, on both stall prevention systems. Often when fully configured we will have a calculated shaker speed as low as 82 knots. We do not actually stall the aircraft, we only take the C-141B to the shaker or a calculated shaker limit. We also make sure the CADC is providing proper information to the stall prevention system.

TMF: What type of route do you fly?

Capt Wilhelmson: We have a planned route on file with Atlanta Center. We always use the same call sign, file for the same routes and altitudes, and once airborne, Atlanta Center does a super job in accommodating us. We've flown over 150 Stretch Starlifter acceptance missions and have had little trouble getting what we request. Our normal route of flight takes us from Dobbins AFB to Knoxville, Tennessee; to Chattanooga; to Rome, Georgia; and finally back to Dobbins. We have been fortunate so far in

that we can get our high altitude stalls going into Knoxville, and our low altitude stalls into Chattanooga, and then proceed directly back to Dobbins.

TMF: What type of aerial refueling system checks do you make either in the air or on the ground?

Capt Wilhelmson: By contract, the refueling system is not required to be flight checked. We do not open the doors or have any kind of a hookup with a tanker. The system goes through a complete functional ground check and the slipway door is operated on the ground only. In our Air Force ground checks, we check to see that it has been installed properly and that the manifold, line drain system, and the lights and re-

fueling switches at the flight engineer's and pilot's stations are working properly.

TMF: From a safety standpoint, what type of C-141B emergencies have you had during the flight acceptance portion of the stretch program?

Capt Wilhelmson: I think we have had the same assortment of inflight problems that most crews encounter. Probably one of the most serious things that has happened to us was losing both central air data computers, leaving us with no reliable airspeed indication. Consequently, we had to rely on groundspeed readouts from the inertial nav system to make our descent. A C-130 joined up with us and provided us with airspeed information on final approach. We've also had constant-speed-drive problems and have been down to one electrical generator. We have had to perform several no-flap landings in response to flight control problems. Other glitches have included engines that wouldn't restart in flight, and engines that we had to shut down for various reasons. However, considering the extent of the modification and the numbers of C-141Bs we have flown, the stretch program has been for the most part, surprisingly smooth running and uneventful in terms of inflight problems.

TMF: Could you describe the weather limitations you operate under for your C-141B flights?

Capt Wilhelmson: For flying safety considerations we have some very high weather minimums for a first acceptance flight on a C-141B. Essentially we are an all-VMC operation. We require a 3,000 foot ceiling and a 3 mile visibility locally at Dobbins while our flight is in progress. We maintain normal night currency, but have yet to fly an acceptance flight after official sunset. If we are "weathered in" for several days we will fly two or three aircraft a day to catch up, but with our reduced FCF profile it is relatively easy to keep pace with the production line.

TMF: At the completion of your C-141B flight acceptance, what takes place before the plane gets back to a MAC unit?

Capt Wilhelmson: After we fly the "new" B-model, we have an in-depth maintenance debriefing. The flight crew, the Lockheed crew chief, Lockheed Quality Assurance inspectors, Air Force Quality Assurance inspectors, Lockheed supervisory personnel, and a MAC representative, CMSgt Elmer R. Rowe, all attend this debriefing. The flight crew documents all discrepancies on a Lockheed form. Discrepancies not related to the modification program or to contractual work performed here are logged in the aircraft AFTO 781. If a discrepancy is considered safety of flight, it is fixed at Lockheed. After the repair process is completed the C-141B goes through a contract end-item inspection by the Air Force Quality Assurance personnel. The acceptance of the aircraft triggers a message to the "owning" MAC unit or to the Warner Robins Air Logistics Center to pick up the aircraft.

TMF: Are there any other C-141B modifications being worked while the Starlifters are at the Lockheed Georgia factory?

Capt Wilhelmson: There are three service life enhancement programs that began shortly after the stretch modification was initiated. The active programs are the Fuselage Station 958 "strap" repair, the Wing Station 77 repair, and prototype development of a corner fitting replacement near Wing Station 77. These repairs are taking place concurrently with the stretch program. Due to a contractual commitment, the C-141Bs are normally accepted, and then put into a hangar for F.S. 958 strap repair and W.S. 77 repair.

TMF: When do you expect the C-141B flight acceptance program to terminate at the factory?

Capt Wilhelmson: We are scheduled to fly the last four aircraft in July, 1982. We are currently four or five planes ahead of the schedule, so if we can keep ahead, we could fly the last flight acceptance on a C-141B in June 1982.

TMF: Thank you, Capt Wilhelmson.

Captain Ron Wilhelmson is currently assigned to the Air Force Plant Representative Office (AFSC), Lockheed-Georgia Company, Marietta, Georgia, as primary acceptance pilot on the C-141B aircraft and Chief of Standardization-Evaluation. He received his B.A. in education from the University of Northern Colorado, along with a commission through AFROTC. After completing UPT at Moody AFB, Georgia, he was assigned to the 14 MAS, Norton AFB, where he served as a C-141 instructor pilot. Captain Wilhelmson has over 2,400 flying hours.

Dear Doc

Dear Doc,

It seems like every time our flight surgeon talks to us in a flight safety meeting she eventually gets around to stressing adequate diet—especially eating breakfast. She obviously hasn't been on the road with us too often as we push our airlifter to various "exotic" places in the system. She should realize there just isn't always time to eat a gourmet breakfast—or any other meal sometimes. I've gotten used to hardly ever eating early in the morning, and I often skip lunch, but I don't feel bad and I haven't had an accident, so what's all the fuss about?

1 Lt Jack Splat
MAC Pilot

Dear Jack,

Skipping breakfast probably places you with the majority of people in the general population—possibly three out of four—according to Dr. J. E. Monagle of Canada's Department of National Health and Welfare. My observations of crewmembers indicate that they are doing a little better than that, but I also think your flight surgeon is right when she stresses proper diet.

After your overnight fast your blood sugar is low when you wake up. This is a form of hypoglycemia, and if you don't refuel your body, it may cause morning headache, irritability, irrationality, grogginess and confusion.

These effects are, obviously, not highly desirable for aircrew members. When compounded by an anxiety-producing situation, such as a no-notice flight check, or inflight emergency, the results can be even more dramatic. This is because the stressful situation causes the release of adrenalin which raises blood sugar and may cause greater anxiety, headache, shakiness, weakness, dizziness, shortness of breath, and heart palpitations. These body symptoms reduce efficiency and may distract the crewmember. Needless to say, with all these unusual physiological reactions going on, your risk of having a mishap is greatly increased.

Studies of students who don't eat breakfast show they do poorer in the classroom. In London, police have noted that traffic accidents happening between 10 and 11 a.m. frequently involve people who have not eaten a proper breakfast. We have no definitive statistics on accidents caused by crewmembers who didn't eat breakfast, but your body is very much like anybody elses and so it's also susceptible to maladies brought on by low blood sugar.

A typical scenario for the hypoglycemia-caused physiological incident might go something like this. The airman has recently achieved his 5-level AFSC as a C-130 loadmaster. He is scheduled with a fairly inexperienced loadmaster for a local airdrop training mission. At 0430 he arises and consumes two cups of coffee and some toast. By 0530 he checks in at the squadron, gets the load information and then goes to the aircraft. His preflight goes pretty smoothly. When the aerial port folks show up with the heavy equipment pallets, they bring along a surprise for our young aircrew member, a Senior Master Sergeant from wing stan-eval. "It's no-notice check time, guys," the old head announces.

At this point the loadmaster's anxiety level peaks, and the adrenal glands go to work. He continues his duties making a few mistakes and by 0730 the mission is airborne without incident.

However, about the time the navigator gives the 20-minute warning, the evaluator notices the airman is making a series of clumsy mistakes and sweating profusely. He asks "the kid" how he feels and the loadmaster reports that he isn't exactly feeling great. In fact, he says he feels dizzy and uncoordinated. The sergeant notices he is also breathing hard.

Recognizing that something is seriously wrong, the evaluator informs the aircraft commander and then treats the young airman for hyperventilation. The AC cancels the drop and takes the Hercules back to the base where the flight surgeon meets the aircraft. The loadmaster is taken to the hospital, and the training mission continues with the stan-eval loadmaster filling in for the stricken airman.

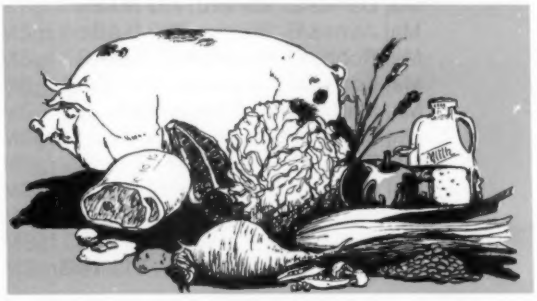
Superficial diagnosis might suggest hyperventilation caused by anxiety brought on by the checkride—sometimes called "checkitis." But that's not the the only factor to consider. Perhaps the hyperventilation was the result of lowered blood sugar. Let's put the pieces together in a logical manner.

The loadmaster was used to a fairly regular diet of heavy meals. After a big evening meal the night before the mission, he ate very little breakfast the next morning. As in any normal person, the amount of sugar in his blood was controlled by the type of food he consumed, and by two body chemicals, insulin, which lowers blood sugar, and adrenalin, which raises blood sugar by "squeezing" sugar from the liver and muscles where it is stored as glycogen.

However, if prolonged fasting has reduced the usual body stores of glycogen, the elevation of blood sugar will be minimal, whereas the unpleasant effects of adrenalin may be great. Normally, the amount of sugar in the blood rises rapidly after eating and this triggers secretion of insulin from the pancreas. In a few hours the level returns to normal. Blood sugar level is especially critical to brain cells because they use sugar almost exclusively as their source of energy.

In the loadmaster's case, he had "fasted" from dinner time the night before (1900 hours) until he came in for examination after the incident. This fast of more than 12 hours was broken only by coffee and toast. This small repast may have been just enough to trigger the insulin mechanism and brought his blood sugar down to a border-line level. Three hours after eating, he was subjected to severe psychological stress in the form of checkride anxiety. This caused adrenalin to be released into the blood stream which possibly caused the symptoms of dizziness, and produced additional anxiety which led to hyperventilation.

Many crewmembers may skip one or more meals each day. But the candy-machine meal—an all-time aircrew favorite—simply does not provide adequate nutrition. By the time supper comes around you feel like you could eat a horse—washed down with some "colorado cool aide," possibly. That's a very poor way to treat the most sophisticated piece of flight equipment carried aboard the aircraft!



And you don't need a gourmet diet to get balanced nutrition either. All food groups should be represented in what you eat. The groups include:

- Cereal, including bread, corn and potatoes
- Fruits
- Vegetables — green or deep yellow
- Fats, such as butter, margarine, etc.
- Meat
- Milk

That's right, you do need fats and carbohydrates in your diet. I'm not saying that you should live on "grease-burgers" and french fries, but I do suggest a balanced diet. Take a good look at what you're now eating and see if you are doing your body justice.

A word about weight control is appropriate here. If you are finding it increasingly difficult to hold the line on your waistline, check with your flight surgeon *before* starting any diet to lose weight. He can tell you how best to get rid of the unwanted pounds without hurting your body. Crash dieting can result in immediate weight loss, but you probably won't get the nutrition required for good health. Also, you may quickly regain the weight. Some research shows that people whose weight frequently goes up and down may be hurting their body more than a person whose weight remains fairly constant even though they may be slightly overweight.

Back to your original question. There is no requirement for a fancy breakfast loaded with processed sugars, cholesterol and carbohydrates to sustain good health. Although individual tastes and needs vary greatly, a glass of orange juice, cereal and milk, perhaps with toast and butter, will provide many of the food groups you need for your first meal of the day.

Your eating habits are very important because they have a great influence on the way you perform—or don't perform—in flight. Inadequate job performance, whether it's while flying an ILS to minimums or figuring a Form F, can be hazardous. You owe it to yourself and your fellow crewmembers to eat right so you can fly right.

Keep the pointy end forward. *Doc*

MAC INDIVIDUAL FLYING-HOUR MILESTONE AWARDS

10,000

Col William F. Hutchison Jr, 118 TAS
Lt Col Bobby R. Gassiott, 704 TAS
Lt Col Richard R. Lund, 75 MAS
Lt Col Kazuto Tomoyasu, 86 MAS
Maj Felix Czech, 702 MAS
Maj Donald F. Scheidler, 97 MAS
CMSgt Swanson B. Brown, 6 MAS
CMSgt Hubert L. Loch, 57 MAS
SMSgt Robert E. Fuchs, 301 MAS
MSgt Frederick Carrara, 37 TAS
MSgt Wayne E. Feathers, 313 MAS
MSgt Perry D. Jackson, 20 MAS
MSgt Frederick W. Knight, 707 MAS
MSgt Norwood Steele, Det 1, 89 MAS

5,000

Col Harold C. Earnhardt, 145 TAG
Lt Col Jordan E. Adams III, 33 ARRS
Lt Col William L. Bertino, 30 MAS
Lt Col Patrick J. Buckley, 41 MAS
Lt Col Richard E. Dickensheets, Det 3, 1401 MAS
Lt Col Ralph T. Dorman, 58 MAS
Lt Col Donald R. Eggerman, 702 MAS
Lt Col Richard J. Ford, 18 MAS
Lt Col Karl A. D. Goss, 18 MAS
Lt Col Robert A. Holloway, 355 TAS
Lt Col Terry L. James, 86 MAS
Lt Col Charles D. Kirkpatrick, 773 TAS
Lt Col Joseph W. Lanahan, 166 TAG
Lt Col Richard Mallchok, 76 MAS
Lt Col James A. Melvin III, 145 TAG
Lt Col Donald J. Murphy, 702 MAS
Lt Col John P. O'Hanian, 18 MAS
Lt Col Richard D. Paprowicz, 57 MAS
Lt Col Everette S. Peterson III, 145 TAG
Lt Col Larry A. Rachuy, 18 MAS
Lt Col Raymond F. Robinson, 109 TAG
Lt Col John S. Rogers, 4 MAS
Lt Col Ernest A. Schwab, 166 TAG
Lt Col Robert L. Sisson, 9 MAS
Lt Col James C. Ward, 702 MAS
Lt Col David D. Williams, 30 MAS
Lt Cmdr William A. Lehmann, 67 ARRS
Maj Robert D. Barr, 1 MAS
Maj Raul Contreras, 9 MAS
Maj William C. Dean, 57 MAS
Maj Michael H. Dolan, 337 TAS
Maj Robert F. Fowler, 1 MAS
Maj Roger A. Fuhrman, 62 TAS
Maj Robert B. Hale, 1400 MAS
Maj Gregory A. Halsey, 18 MAS
Maj David B. Hickman, 704 TAS
Maj John D. Howder, 1 MAS
Maj Garry S. Kahn, 702 MAS
Maj Gordon D. Kesselring, 57 MAS
Maj Hugo E. Kurtz, 702 MAS
Maj Gregory A. Leppert, 4 MAS
Maj William W. Lynd, 33 ARRS
Maj Alva L. Matheson, 9 MAS
Maj Daniel L. Navarro, 702 MAS
Maj James R. Polizzo, 702 MAS
Maj Bobby D. Reynolds, 772 TAS
Maj Edmund Rossnagel, 702 MAS
Maj Martin P. Sedlacko, 702 MAS
Maj Theodore D. Siepmann, 702 MAS
Maj Earl J. Speirs, 702 MAS
Maj Cornelius Tiebout, 301 MAS
Maj Wallace R. Tousey, 139 TAS
Maj Richard W. Walter, 732 MAS
Maj David P. Weingartner, 911 TAG

Maj Jay P. White, 702 MAS
Maj George A. Winkler, 20 MAS
Capt Thomas C. Burmesiter, 356 TAS
Capt Ralph W. Dyer, 302 MAS
Capt Thomas Gililland, 18 MAS
Capt John G. H. Jackson, 301 MAS
Capt Joseph V. Molinari, 702 MAS
Capt Milford L. Schliemann, 57 MAS
1 Lt Donald L. Hoover, Det 9, 67 ARRS
CMSgt James H. Causey, 57 MAS
CMSgt James W. Ketterman, 8 MAS
CMSgt Robert W. Rowe, 30 MAS
SMSgt Johnnie L. Battle, 30 MAS
SMSgt James A. Currie, 18 MAS
SMSgt Franchot Johnson, 86 MAS
SMSgt Charlie P. Murphy, 6 MAS
SMSgt John L. Thomas Jr, 30 MAS
MSgt William R. Anders, 355 TAS
MSgt Donald L. Barnett, 30 MAS
MSgt L. E. Brewer Jr, 185 TAS
MSgt Joseph O. Castaneda, 8 MAS
MSgt Clifford L. Cobb, 707 MAS
MSgt Carl M. Duncan, 18 MAS
MSgt Thomas G. Durkin, 337 TAS
MSgt Thomas Evans, 30 MAS
MSgt Chester W. Field, 166 TAG
MSgt Charles R. Ford, 86 MAS
MSgt John W. France, 30 MAS
MSgt Luigi Graziani, 18 MAS
MSgt David J. Hartford, 57 MAS
MSgt Eddie B. Jones, 702 MAS
MSgt Terrance R. Kelly, 21 TAS
MSgt Charles R. Kinkaid, 4 MAS
MSgt John R. Leavitt, 6 MAS
MSgt Richard T. MacTrady, 702 MAS
MSgt James E. Mason, 301 MAS
MSgt Shem R. Miller Jr, 702 MAS
MSgt Will Nicholson, 30 MAS
MSgt Darrell R. Parker, 76 MAS
MSgt Daniel F. Paumier, 15 MAS
MSgt John D. Reimer Jr, 76 MAS
MSgt Oscar T. E. Rogue, 76 MAS
MSgt William D. Scott, 30 MAS
MSgt Gerald T. Smith, 4 MAS
MSgt Ronnie W. Sonderquist, 4 MAS
MSgt Larry D. Stover, 21 TAS
MSgt Arne Suvatne, 86 MAS
MSgt Robert Terenzio Jr, 4 MAS
MSgt Dennis M. Traudt, 4 MAS
MSgt Ruiz Veda, 68 TAS
MSgt Daniel W. West, 18 MAS
MSgt William B. Williams, 37 TAS
TSgt Charles Alexander, 37 TAS
TSgt John Bobenreith, 9 MAS
TSgt William H. Clay, 702 MAS
TSgt Michael H. Delaby, 8 MAS
TSgt Stephen P. Drew Jr, 57 MAS
TSgt Wayne F. Estey, 18 MAS
TSgt John D. Gonzales Jr, 57 MAS
TSgt Joe E. Hull, 30 MAS
TSgt Horace Jenkins, 37 TAS
TSgt Gregory C. Klutz, 6 MAS
TSgt Larry A. Ludwig, 30 MAS
TSgt Alvin Marshall, 21 TAS
TSgt George Odell, 21 TAS
TSgt David G. Pasch, 57 MAS
TSgt Percy L. Raleigh, 86 MAS
TSgt Robert J. M. Shirey, 57 MAS
TSgt David L. Swandalito, 326 MAS
TSgt Stephen Thornburg, 37 TAS
TSgt Thomas O. Werner, 702 MAS
TSgt Steve J. Zamsky, 815 WRS
SSgt Glyn S. Murdock, 57 MAS
SSgt Larry R. Wagener, 772 TAS

This is only a partial list of awards earned so far in 1981. We will complete the backlog in the next few issues and then publish all awards as they are processed (ranks and units are those at time of award). —*Ed*

DEJAVU

Tempelhof Airport, Germany

(elevation 164 feet)

Located in central Berlin, Tempelhof, of Berlin Airlift fame, is six miles southeast of Tegel Airport which handles most of the commercial air traffic into "The Divided City." Entry into the Berlin control zone from the west is via the three air corridors (north, central and south). These corridors are each 17.4 miles wide and aircraft must remain within their boundaries while approaching Berlin over East Germany (GDR). The Berlin control zone surrounds Tempelhof and aircraft straying outside its boundaries may be fired on without warning. The highest obstruction in the control zone is a tower 2.5 miles north that reaches 1,306 feet MSL.

Tempelhof has two parallel runways which ironically are oriented east-west. Runway 09L/27R is 6,867 feet long.

Runway 09R/27L (6,943 feet) is the designated jet runway and has precision approach capability in both directions. Both runways also have displaced thresholds on both ends which reduces the length available for landing. An approach to runway 27L takes you over the Soviet zone. You can easily spy the Berliners eating their bratwurst and sauerkraut through windows of the apartment buildings which crowd against both sides of the final approach course. The buildings, coupled with the steep glide path and short, narrow runway can create a visual illusion that may result in higher-than-normal threshold crossings and longer touchdown points if you're not especially careful.

–Adapted from AQP-51423

On final to runway 27L, 2.5 miles out. The approach is over the Soviet Zone of Berlin.

One mile final to runway 09R.

Runway 27L. Apartment buildings are close to runway.

C.R. TERROR

The Miscalculating Major mismaneuvers in the Stretch.

Gadzooks!" C.R. exclaimed, glancing fitfully at the snack bar clock. "It's time to hit the road for Mother MAC," the Portly Pilot grunted as he washed down his burrito and chili with a fresh glass of canned O.J.

"Get the lead out, Sammy m'boy," prompted the Master Manipulator, who hastily fired up one of his gold-ring Egyptian Ovals for a few quick after-chow puffs. As the Dynamic Duo departed for the Stretch Starlifter across the ramp the "MAC sun" was rising in a half-crescent, in the cloudless night sky. In his haste to get to the plane in the darkness, C.R. managed to trip over the power cart cable, and Sam dutifully helped his Clumsy Commander to his feet. C.R. dusted off his custom tailored Nomex and readjusted his violet scarf.

"Thanks Sammy m'lad," commented C.R., "Ya' know we have to be especially careful during night operations. Why just the other evening Tassels and I were at a drive-in and. . . ."

The Terrorific Twosome managed to grope up the crew ladder in the dark. They strapped themselves in and C.R. called for the Form F and the 781. Ty Downs handed the Form F up and asked, "Did you remember my burger and fries from the snack bar, sir? My grease-low-level light is on again," he explained.

"Check and double check," replied the Pudgy Pilot as he

handed a crumpled white bag to the loadmaster. "However, they are a little mashed due to a misplaced power cart."

Sergeant Torque was completing his exterior inspection when the Rotund One called for the before-starting-engines checklist. Max Torque protested over the interphone. C.R. replied sagely, "Time's a wastin', Sarge. Just pull out your standard midnight takeoff data for Rhineland Air Base, RCR dry," adding sardonically, "Neither rain, nor snow, nor sleet, nor TOLD cards can keep the World's Greatest Aviator from an early arrival back at the home drome."

Max Torque shrugged and began to read the checklist. With engines started and both INS's placed in nav operation, the stretch Starlifter began its taxi to runway 09. As usual, C.R. was conducting a left-seat commentary on anything that happened to appeal to his fickle faculties. This time the Winged Wizard started out on the aerial refueling system but the oration became bogged down when he couldn't remember the exact purpose of the slipway door. Without batting an eye or missing a beat the Addled Aircraft Commander switched to night taxi operations. After all, it had been almost a whole month since he completed aircraft commander initial qualification in aerial refueling at "Big A."

"Sammy, m'boy," explained the Pompous Pilot, "those stan-eval weanies are really hot on

night taxi operations. Their latest bag is wing-tip clearances and proper use of landing and taxi lights in poorly lit areas."

In the right seat, Long Suffering Sam summoned all his courage and asked, "Aren't we taxiing a little fast through the parking area, sir?"

"Nonsense, m'lad, 25 knots is barely sufficient to meet our on-time departure window," counseled the Ace of Airlift who could count his timely takeoffs on one hand. "In addition," C.R. rambled on, "one must think of our firm scheduled return time and our well deserved post-mission crew rest. Besides the Stretch was designed for faster taxi speeds. It's longer, you know."

Sammy scratched his forehead and called for the clearance. Clearance delivery gave them radar vectors to Wurst VOR and then flight plan route to Lands End. Because of the taxiway repair further down the parallel, the Heavy-Footed Honcho guided the C-141B onto the midfield taxiway. Sam requested permission to do a back taxi to the end of the runway to get into position for the takeoff roll.

C.R. explained to the copilot. "Back taxi is a specialty of mine. I remember back in '75 at Lista, Norway, where I impressed the whole Norwegian Air Force with my taxiing ability, even though we did manage to singe a couple of F-104 Starfighters. However, your leader has developed a certain finesse with these longer B-models."

As the Stretch approached the end of the runway, tower gave approval for the 180 degree turn. "Clear right," called Sam. "Clear left," quipped the Silver-tongued Fox as he put on his emerald green pigskin gloves for the takeoff and slowed the aircraft down to fifteen knots for the turn.

"Sammy m'boy," exclaimed the Round One, "I've got some good news and some bad news. The good news is that we're going to maximize our training on this mission begining with a left-seat simulated-three-engine climb. The bad news is that I need all the approaches and landings for today."

Long Suffering Sam replied, "I understand. I suppose I can volunteer to come in on my free time and fly a local this week to keep from going noncurrent."

Meanwhile, the Field-grade Fumbler began his high-speed back taxi, while at the same time, rambling on in his recurring lecture on night taxi operations. "The minimum width of paved turning area needed for the Stretch is over, well, that's what we've got Dash Ones for. Regardless, my technique is to bring the plane to the edge of the runway and sharply execute a smart turn. This beauty will turn on a dime," continued C.R.

Sergeant Torque, performing scanner duties on this mission, remarked, "I think we're getting too close to the edge of the runway, Major. Maybe we should stop so I can deplane and check the clearance. It's awful dark outside."

"Not to worry," remarked the Bulbous Bumbler, "I've written the book on back taxi techniques. I assure you we're nowhere close to my personal tolerances for operation near the edge of the runway." Max and Sam frowned as the Stretch came closer and closer to the edge of the concrete. C.R. began his 180 degree turn about 600 feet from the end of the runway.

"This will save us line-up time," chuckled the Paunchus

Pilot. About 130 degrees into the turn the World's Greatest Airlifter managed to guide the B-model off the runway and into the grass. Captain Sam almost went into cardiac arrest and sputtered, "Now we've done it! I guess I better call the tower and let them know."

"Don't worry about it, Sammy m'boy. We'll just continue the turn and get this ship back on the road. After all just last year they proved at Griffiss AFB that a Starlifter could operate off prepared surfaces. Can't afford to block the runway, ya know, Sammy," chirped the Misinformed Major. "Besides," he continued, "we wouldn't want to wake up the command post controllers at this late hour."

"Wasn't that a C-5 test at Griffiss?" questioned the competent copilot. But before he could pursue the subject, the

Magic Major managed to bring the Stretch back onto the runway after about 500 feet.

"I hate to say I told you so, Sam," quipped the Portly Pilot, "but it was a piece of cake getting this plane back into position. Reminds me of an incident back in '73 during Nickle Grass—."

Rhineland Tower interrupted, "MAC 70992 heavy, report position." C.R. decided to take the call, "Tower, MAC 70992 heavy, almost ready for takeoff, departure end runway 09."

Just then Max Torque called on the interphone, "Sir, it looks like we may have taken out a runway edge light and I don't see that distance remaining marker anymore either."

Sam just shook his head and sighed, "What a way to start a crew duty day. I guess we should taxi back in and check it out."

"Negatory, m'boy," C.R. replied, "Call for takeoff clearance and update those winds, it's time to press. I can't afford to keep Tassels waiting. Besides, do you really believe that I would actually run over a poor defenseless runway light, Sam? I'm surprised at you!"

Long Suffering Sam was definitely uneasy over this turn of events, but called the tower for takeoff clearance and winds anyway. "MAC 70992 heavy, current winds are 150 at 27 gusting to 30 knots. RCR dry...."

Sergeant Torgue instantly went into crosswind component calculations and after a minute of digging in the books, he announced, "That gust factor just put us out of limits for the takeoff, sir."

MAC's Flakiest Flyer scowled at the conscientious flight engineer. "The problem, guys, is that you seem to be a no-go crew today. I say it's time to go for the gusto so let's all prepare for takeoff. Sammy m'boy, it's time you learned the MAC standard technique for crosswind takeoffs. We'll merely wait to takeoff between gusts," explained the Errant AC. "Won't take an extra thirty seconds to make our departure, you'll see." The copilot winced as he asked the tower for instantaneous readouts of the wind. For one 20-second period, the tower gave winds of 150 at 27 knots with no gusts and the Press-On Pilot began his takeoff roll. "Sammy m'boy, you maintain wings level and I'll take care of the nose wheel steering." The Stretch managed to waddle off the ground due to C.R.'s superb handling techniques and began its normal climb profile to Wurst VOR.

"You see, m'lad," C.R. uttered, "You've got to be tough to fly the heavies." As the Starlifter passed through 10,000 feet, the Somnambulistic Skipper got ready to assume his normal cruise profile—in the bunk. "Sam, any problems with you taking this nine-hour leg? I've got to conserve my strength for Tassels and the ski slopes tomorrow."

The copilot, already sleepy, muttered, "I was planning on catching a nap before we coasted in over Goose."

"No sweat, I'm always glad to help out my crew on these long flights. Just make sure I'm awake in time to prepare the approach briefing," instructed the Pompous Pilot. Meanwhile, he began to munch his stale bag of nacho-cheese-flavored corn chips with the hot mike on. "Sergeant Downs," C.R. called over the interphone, "Could you please heat up my frozen Mexican TV dinners and open a couple of those cans of chili? Thought I might have a little snack before retiring."

About an hour after takeoff London Control called the Starlifter. "MAC 70992 heavy, London Control, the command post at Rhineland Air Base requests you contact them straight away by a phone patch through Croughton Airways."

"Roger, London Control," the copilot replied as he checked Croughton frequencies set in the number one HF.

Sam got through to Croughton and had them patch in the command post. "Rhineland, MAC 70992 heavy, do you have traffic for us?" he asked.

"Affirmative, MAC 992. A C-5 here has reported some debris on the runway and has injested some FOD in number four engine and runway 09 is temporarily closed. The tower seems to think your aircraft had something to do with it. Any comments?" the duty officer queried.

"MAC 992 will call you back in five minutes," choked Sammy, his face turning ashen. "Wake up the Boss, Max, I think he should talk to these guys himself," Sam instructed the flight engineer.

Sergeant Torque gently woke up the aircraft commander and told him about the phone patch request. The Rotund One fell out of the crew bunk, then made his way to the left seat. The Chief looked at his Rolex oyster perpetual watch and began to ponder. Awakening to the possible ramifications of his off-runway activity, the Ace of Airlift executed another 180 degree reversal of position, and rationalized to his sidekick, "Get Rhineland on the line, post haste. No sense in taking any chances where FOD's concerned, eh Sam?"

QUICK STOPPERS

Those Are the Breaks

This one is straight out of the simulator—lights flashing, circuit breakers popping and overheat indicators climbing. The Weather Herk was on initial takeoff for a local proficiency sortie. When the anti-ice system was turned on, the left-inboard-wing-overheat indicator went to full hot and the left-outboard-overheat light came on. Correct Dash One procedures were followed, but to no avail. In quick succession the number one prop jumped to 105 percent rpm, but stabilized at 100 percent when mechanical governing was selected. The crew decided that the number one secondary-fuel-pump-pressure light which had also illuminated by then was erroneous and left it alone. They returned to base post haste maintaining VFR in VMC, landed and evacuated the humbled Herk on the runway.

The wrench benders found the left anti-ice valve had come apart at the screw joint. It appears that during overhaul someone had not reconnected the two halves correctly. This small oversight, coupled with normal vibrations, wing flex, and high heat, caused the break, allowed engine compressor bleed air to burn and scorch wiring bundles, throttle cables, condition lever cables and the like.

Hoist Hijinks

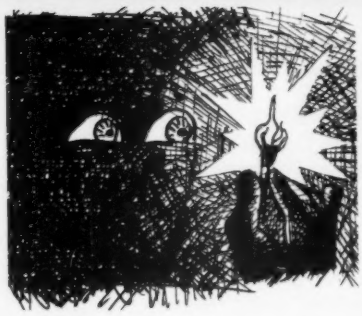
Some days you just can't get there from here no matter how hard you try. Take this case of two young pararescuemen. There they were in the water waiting for a multi-motor fling-wing to come by for a practice water pickup. The UH-1N arrived just as the script called for. When the hoist cable and penetrator were lowered, the PJs climbed aboard. On the way up, though, the darn thing broke—detached at the swaged end that attached the hook assembly. The PJs reentered the water from about 10 or 15 feet. Luckily nobody was hurt and the PJs finally made it to shore in a boat. Turns out that everybody did everything right but the cable just broke from the pure stress of it all.

Sometimes it just doesn't pay . . . !

Notable Quote

If mankind profits from past mistakes, what a honey of a future is coming up.

—*Up Front,* Delta Airlines



Lights Out

We've told you before that it has happened to several MAC aircraft and we're going to tell you again. This particular C-141A had been the victim of a total electrical failure. After it was "fixed," the Starlifter flew an FCF and five, count 'em, five successful local sorties without incident. Then, during an enroute descent, the number two essential-AC-bus B-phase power-feeder circuit breaker popped. It was reset, the number two generator light flashed momentarily, then the generator quit. The B-phase CB popped again, the emergency generator came on the line and the remaining six number two essential-bus-power CBs popped—one at a time. All associated number two essential AC and nav bus components then quit, as advertised.

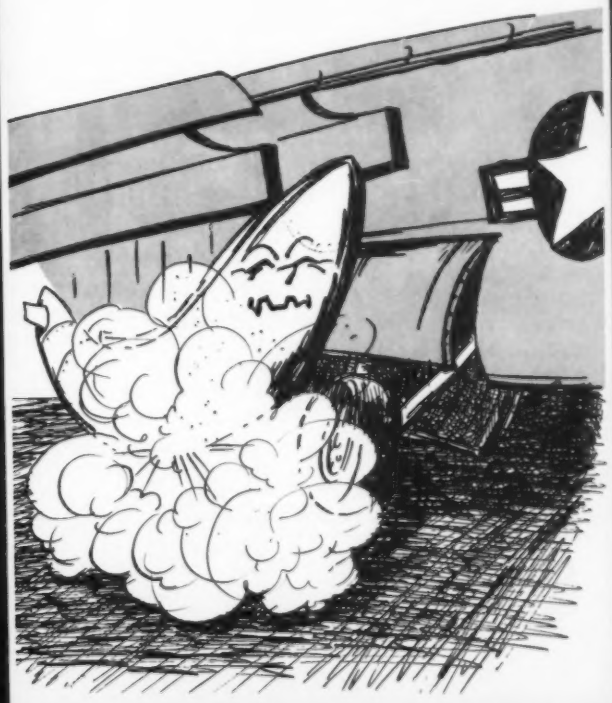
After an uneventful landing, maintenance took out their fine tooth comb, did some trouble shooting but could give the short circuiting Starlifter no better prognosis than a big CND (could not duplicate). The flight back home was also uneventful. More troubleshooting by the home-drome maintainers found a bad emergency-bus-power relay and, of course, several "unrelated" electrical problems. Suppose they had been in IMC?

Another Droptank Bites the Dust

A droptank which was thought to be empty was being downloaded from a Navy A-7. The supervisor failed to use the checklist which required that he make a visual check of the tank to confirm that it was empty. It wasn't, and the cost to replace the drop tank, which was damaged beyond repair, was $1,100.

Just about one year later, another Corsair II was scheduled for downloading droptanks. The aircraft had been defueled on the flight line and was towed into a hangar and parked beside another A-7. The maintenance specialists left the hangar to get some tools. When they returned, they proceeded to remove the left droptank. The only fallacy in this operation was that they removed the left droptank from the wrong A-7. When the droptank, which was filled with 150 gallons of fuel, was released, it impacted the hangar floor with a loud and sloshy thud. Fortunately, the two maintenance troops holding the tank only received minor injuries—it could have been much worse.

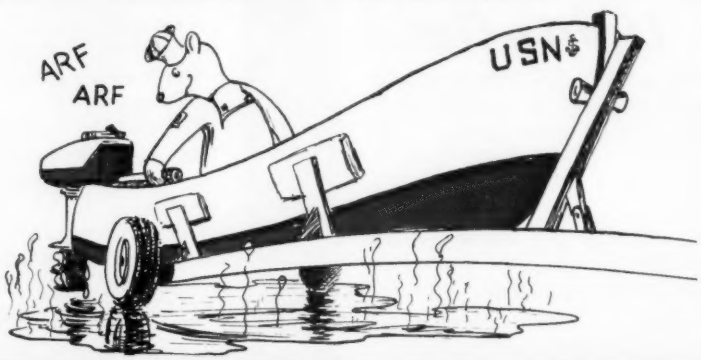
—adapted from USN *Weekly Summary*

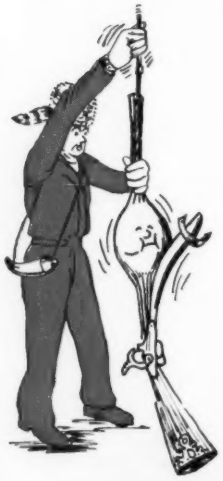


Leaky SEALS

Here's the same song, umteenth verse. A C-130H was scheduled to transport some Navy SEALS and their 22-foot fiber glass boat and trailer to a Naval Air Station. The SEALS had "prepared" the load and told the inexperienced loadmaster the boat only had 3/4 of a tank of gas. This could not be confirmed, however, due to an inoperative fuel gauge and the design of the tank. There was also a suspicious lack of supporting documentation. Still, the aircrew accepted the bogus load and pressed on. Passing 14,000 feet, the internal fuel tank of the boat started venting gasoline onto the cargo floor. After the appropriate Dash One emergency procedures were completed, the gaseous Hercules landed uneventfully. Luckily there was no damage to the crew or the plane.

The causes on this one are obvious. First, the guys who said they'd prepared the load hadn't. The appropriate documents weren't prepared. Finally, the crew failed to insure that the boat had indeed been drained of petrol. If there ever was one, this was an A-W-T-H (accident waiting to happen).





Load Abuse

At a Red Flag this year, one particular brown-and-green flying machine crew seemed to be acutely aware of the nature of the game. They briefed all aspects of the mission thoroughly and the AC paid special heed to some extra maneuvering that might be required to keep the Herky bird from becoming a sitting duck. Somewhere between slowdown and the IP, someone saw a bad guy setting up for a gun pass. The AC called over interphone for everyone to hold on and started the prebriefed evasive maneuver—drop the nose and jink.

The loadmaster, who had a restraining harness on but had removed the extra restraining straps in preparation for the airdrop, suddenly became airborne. When gravity finally reasserted itself, the levitated Load collided unceremoniously with the ramp, breaking his arm.

As we multi-motored MAC types become more involved with the combat maneuvering business and learning how to overcome external threats by keeping out of the bad guy's sights, don't forget about those threats inside our airlifter.

AFTER DEADLINES

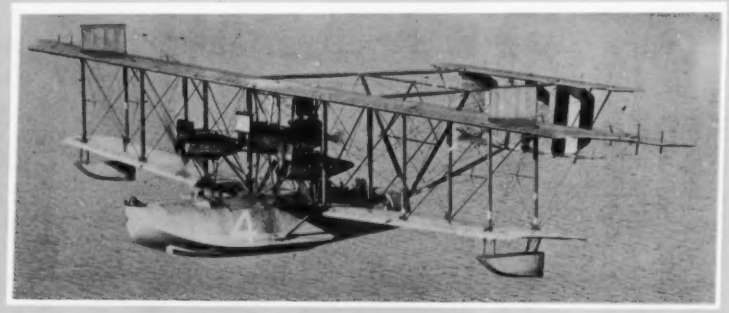
LIGHTNING STRIKES McGUIRE. After a 23-year search, officials at McGuire AFB, New Jersey, finally found a Lockheed P-38 Lightning. Earlier this year, the Air Force Museum donated a "Forked-Tailed Devil" to be used as a memorial to the late Major Thomas B. McGuire Jr, the base's namesake. It was in a P-38 similar to the new memorial that the Ridgewood, New Jersey native downed 38 enemy airplanes in World War II, becoming the second leading American ace of all time. The Lightning has undergone a complete reconditioning in preparation for its use as a memorial, according to Lieutenant Colonel Edward M. Leete, 438 MAW P-38 Project Officer. The reconditioning program also included refinishing the aircraft in the identical paint scheme of Major McGuire's last P-38, "Pudgy V." Look for this unique memorial which will be located on a pedestal in the main gate traffic circle.

THE 13TH ANNUAL AIRLIFT ASSOCIATION NATIONAL CONVENTION will be held at the Camelot Inn, Little Rock, Arkansas, during 16-18 October 1981. Registration fee after 1 October 1981 is $60 for single and $50 for spouse.

MODIFICATION OF NOMEX JACKETS. The CWU 45/P and 36/P NOMEX jackets have caused concern to many due to the pleated back. Reports have indicated that the pleated area often catches on hatches or other equipment in the cockpit. Ops Supplement 112-S-2, 15 June 1981, to T.O. 14P3-1-112 contains authorization to remove the pleated area. Follow-on production jackets will not have the pleated back.

AIR ROUTE TRAFFIC CONTROL CENTERS across the United States have recently been provided with a new system, Direct Access Radar Channel (DARC). DARC will provide the capabilities required to operate a safe and effective enroute traffic control system when there is a failure or malfunction in the primary radar computer processing system. The DARC presents a sharper radar scope presentation which is much easier to read than the non-computerized radar display of the present day "broadband" backup system.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1981-765-107/6



Regulations For Operation of Aircraft

Commencing January 1920

1. Don't take the machine into the air unless you are satisfied it will fly.
2. Never leave the ground with the motor leaking.
3. Don't turn sharply when taxiing. Instead of turning sharp, have someone lift the tail around.
4. In taking off, look at the ground and the air.
5. Never get out of a machine with the motor running until the pilot relieving you can reach the engine controls.
6. Pilot's should carry hankies in a handy position to wipe off goggles.
7. Riding on the steps, wings, or tail of a machine is prohibited.
8. In case the engine fails on takeoff, land straight ahead regardless of obstacles.
9. No machine must taxi faster than a man can walk.
10. Never run motor so that blast will blow on other machines.
11. Learn to gauge altitude, especially on landing.
12. If you see another machine near you, get out of the way.
13. No two cadets should ever ride together in the same machine.
14. Do not trust altitude instruments.
15. Before you begin a landing glide, see that no machines are under you.
16. Hedge-hopping will not be tolerated.
17. No spins on back or tail slides will be indulged in as they unnecessarily strain the machines.
18. If flying against the wind and you wish to fly with the wind, don't make a sharp turn near the ground. You may crash.
19. Motors have been known to stop during a long glide. If pilot wishes to use motor for landing, he should open throttle.
20. Don't attempt to force machine onto ground with more than flying speed. The result is bouncing and ricocheting.
21. Pilots will not wear spurs while flying.
22. Do not use aeronautical gasoline in cars or motorcycles.
23. You must not take off or land closer than 50 feet to the hanger.
24. Never take a machine into the air until you are familiar with its controls and instruments.
25. If an emergency occurs while flying, land as soon as possible.